

## **REMARKS**

Claims 1-7, 9, 11-15, 17, 19, 21-24, 26-30, 34, 36, 39, 42-43, 51, 52, 60-62, and 75-84 are pending. Claims 1-3, 7, 9, 11, 13-15, 21, 22, 24, 26, 52, 60, 75-77, and 80-82 have been amended. Claims 4, 5, 17, 36, 39, 42, 61, and 62 are original. Claims 6, 12, 19, 23, 27-30, 34, 43, 51, 78, and 79 have been previously presented. Claims 83 and 84 are new. Claims 8, 10, 16, 18, 20, 25, 31-33, 35, 37, 38, 40, 41, 44-50, 53-59, and 63-74 have been canceled.

No new matter has been introduced by the response, and no new issues have been presented by the amendment. The amendments are made in order to place the application in better form for appeal by reducing and simplifying the issues for appeal.

### **1. Summary Of Telephonic Interview With The Examiner On November 25, 2009**

The Applicants' representative appreciates the Examiner's time in a telephonic interview dated November 25, 2009 regarding the present patent application. In the interview, claims 1-3, 80, and 82 were discussed specifically. The remaining pending claims were discussed generally. The Examiner indicated that claim amendments that recite the capillary number limitation before fluids are introduced into a microchannel would be favorably considered.

### **2. Claim Objections**

Claims 53-59 have been objected to. As argued in our response dated June 30, 2009, claims 53-59 have been canceled. Accordingly, the Applicants respectfully submit that the objections are moot and should be withdrawn.

### **3. Claim Rejections under 35 U.S.C. § 112, Second Paragraph**

Claims 2, 6, 7, 25, 38, 40, 44, 49, 52, and 60 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention. The Applicants respectfully traverse these rejections based on the following remarks.

As argued in our response dated June 30, 2009, various claims have been amended. Claims 25, 38, 40, 44, and 49 have been canceled.

Accordingly, the rejections against claims 2, 6, 7, 52, and 60 should be withdrawn; and the rejections against claims 25, 38, 40, 44, and 49 are moot and should be withdrawn.

#### **4. Claim Rejections under 35 U.S.C. § 103**

Claims 1-7, 9, 11-15, 17, 19, 21-22, 24, 26-30, 34, 36, 38-44, 51-62, and 75-82 have been rejected under 35 U.S.C. § 103(a) over Weigl et al. (U.S. Pat. No. 6,409,832) in view of Chayen (J. Cryst. Growth, 1999) and any of Shaw et al. (GB 2,097,692), Lemaitre et al. (WO 98/02237), or Torkkeli et al. (Int. Conf. on Sensors and Actuators, 2001). Claim 23 has been rejected under 35 U.S.C. § 103(a) over Weigl in view of Chayen and any of Shaw, Lemaitre, or Torkkeli, and further in view of Bardell et al. (U.S. Pat. Pub. No. 2001/0048900 A1). Claims 49 and 50 have been rejected under 35 U.S.C. § 103(a) over Weigl in view of Chayen and any of Shaw, Lemaitre, or Torkkeli, and further in view of Pantoliano et al. (U.S. Pat. No. 6,569,631). The Applicants respectfully traverse these rejections based on the following remarks.

As argued in our response dated June 30, 2009, there is no reason to combine Weigl with Chayen. The cited references do not teach or suggest all the claim limitations. Weigl teaches away from using plugs.

Also, as argued in our request for reconsideration dated October 29, 2009, the Applicants do not agree that the Examiner has made out a *prima facie* case of inherency because the mere fact that droplets may form in Shaw, Lemaitres or Torkkeli does not mean these references necessarily teaches the capillary number condition. Further, the Applicants submitted an additional piece of evidence, an article published by the Applicants (*Anal. Chem.*, **2004**, 76, 4977-4982), which further elucidates that adjusting the capillary number condition is one method to form plugs. In other words, none of the

cited references teaches or suggests, expressly or inherently, providing a carrier fluid and various fluids *such that a capillary number of an interface between the carrier fluid and the various fluids would be sufficient to allow plugs to form in the carrier fluid* before introducing the fluids into a microchannel.

In view of the above, the Applicants respectfully submit that Weigl in view of Chayen and any of Shaw, Lemaitre, or Torkkeli do not teach or suggest all the claim limitations as recited in amended independent claims 1, 3, 80, and 82. Accordingly, the rejections against amended independent claims 1, 3, 80, and 82 have been overcome and should be withdrawn.

Moreover, the dependent claims are patentable since they depend from the patentable independent claims 1, 3, and 80. In addition, the Examiner fails to show how the further limitations recited in the dependent claims would be made obvious in view of the cited references.

For example, as argued in our response dated June 30, 2009, neither of the cited references teaches or suggests the limitations recited in dependent claims 6, 7, 9, 11, 19, 21, 22, 27-30, 61, 62, 76, 78 and 79.

## **5. New Claim**

New claims 83 and 84 depend from amended independent claim 1. Support for new claims 83 and 84 can be found in Applicants' specification, for example, original claim 76, and Figs. 4-7.

**6. Conclusion**

Based on the above, the Applicants respectfully submit that the claims are in condition for allowance. If any issues remain, the Examiner is kindly invited to contact the undersigned attorney to expedite allowance.

Respectfully submitted,

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